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ABSTRACT

Current research has fragmented educators' vision of both written language and development. A more integrative vision, one that preserves the integrity of written language as a symbol system, is based on five principles that characterize written language development: (1) the establishment of equivalences; (2) exploration and orchestration of the system; (3) reliance on shifting relationships of form and function; (4) differentiation and integration of symbolic functions; and (5) participation in social dialogue. These principles highlight the dialectical relationship between function and form, between child construction and adult guidance. The articulated vision of development differs in fundamental ways from most current viewpoints, as it does not consider written language as simply an extension of the child's oral language but as the evolution of a distinct symbolic option with links to the child's entire symbolic repertoire. Viewing written language growth in this way may allow for a more open-ended vision of its development, and the developmental principles discussed may suggest some possibilities for negotiation between whole language and basic skill proponents. (One hundred fourteen references are attached.) (Author/RS)

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Center for the Study of Writing

Technical Report No. 42

THE WORD AND THE WORLD: RECONCEPTUALIZING WRITTEN LANGUAGE DEVELOPMENT OR DO RAINBOWS MEAN A LOT TO LITTLE GIRLS?

Anne Haas Dyson

April, 1990

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Abstract

Arguing that current research has fragmented educators' vision of both written language and development, this article aims to contribute to a more integrative vision, one that preserves the integrity of written language as a symbol system. Based on a critical consideration of literature both on written language growth and on the role of symbols in human experience, the article suggests five principles that would seem to characterize written language development: the establishment of equivalences, exploration and orchestration of the system, reliance on shifting relationships of form and function, differentiation and integration of symbolic functions, and participation in social dialogue. These principles highlight the dialectical relationship between function and form, between child construction and adult guidance. The articulated vision of development differs in fundamental ways from most current viewpoints, as it does not consider written language as simply an extension of the child's oral language but as the evolution of a distinct symbolic option with links to the child's entire symbolic repertoire. The implications of this viewpoint for both sociopolitical and pedagogical issues of literacy instruction in early schooling are discussed.

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THE WORD AND THE WORLD: RECONCEPTUALIZING WRITTEN LANGUAGE DEVELOPMENT OR DO RAINBOWS MEAN A LOT TO LITTLE GIRLS?

by

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> On the last day of the school year, Margaret asked her kindergarten through third-grade students to remember with her the stories they had written during their years in the primary school. The third graders especially discussed the value writing had come to have in their lives as a way of sharing experiences, developing their "imaginations," and expressing themselves as "artists," and they looked back with both puzzlement and appreciation to their kindergarten year. For example, Gina commented, "The one thing I know meant a lot to me in kindergarten was rainbows, 'cause every single um story in my journal has a rainbow in it"—an observation Margaret agreed with: kindergarten girls' stories "have lots of rainbows and stars and flowers and hearts."

Gina was well socialized into the literacy values emphasized in school, if not out of school, and thus looked at her early efforts with the language of those values. Writing should "mean" something—and topics repeated over and over must "mean a lot."

Researchers of child literacy development also examine children's work with "literate" eyes, searching for the meaning of young children's first efforts. Their perceptions and interpretations are shaped by different disciplinary perspectives and thus have collectively yielded a vision of development that is multilayered (e.g., Hall, 1987; Teale, 1987). For example, informed by developmental psychology, particularly Piaget (Piaget & Inhelder, 1969), many researchers have emphasized the sense of children's first interactions with pencil and page. Their focus has frequently been on children's words, particularly the encoding or spelling knowledge reflected in children's first written forms and the evolution of those forms into more conventional structures (Ferreiro, 1988; Henderson & Beers, 1977; Read, 1986).

Others, informed by the ethnography of communication, have emphasized the sense of adult behavior, observing the functions of literacy available in diverse kinds of communities and stressing how children are socialized into adult literacy practices (e.g., Heath, 1983; Schieffelin & Cochran-Smith, 1984). Their focus has included the kinds of discourse worlds, including the kinds of story worlds, valued

in particular cultures. This concern with discourse worlds is shared with those researchers who, often informed by linguistics and English, have documented how children's construction of written discourse worlds changes over time (e.g., Newkirk, 1987; King & Rentel, 1981).

As the study of child literacy becomes separated out into layers of studies, socialization into language function becomes separated from child construction of symbolic form, and the encoded word loosened from its connection with the discourse world. And, as a result, the essence of the child's developmental challenge becomes blurred: that challenge is to develop a holistic but flexible *system*, an organized whole in which textual words and worlds are dynamically linked with each other and with the functional context of which they are part. Moreover, this fragmented view of written language and of growth prevents us from viewing the whole of the written system itself from new vantage points.

In this article, I aim to reconceptualize early written language development in fundamentally different ways. I offer both a more integrated vision of that development and also a vision that places it more firmly within a broader framework. As I argue in the last section of this paper, such rethinking has sociopolitical ramifications, for the theoretical perspectives we assume on written language have pedagogical implications for the diverse population of children in our schools.

I begin by briefly discussing the nature of symbol systems in general and the written language system in particular. By examining this system, I intend to allow insight into why it is so complex to study and so puzzling to learn—and why, for both adult researcher and child author, word and world can be difficult to reconcile comfortably. I then consider the sorts of developmental principles that would seem to characterize the evolution of a symbol system; in so doing, I draw upon the work of researchers informed by diverse perspectives, including developmental psychology, cultural anthropology, and philosophy, all of whom have focused on *the nature and role of symbols in human experience*, which is the broader framework of interest. Next, to illustrate, integrate, and give human dimensions to these theoretical principles, I present a brief case history of a 5-year-old's literacy behaviors in the opening months of school. Finally, I discuss the implications of these principles for literacy programs in K-3 classrooms, arguing that a broader and more complex vision of written language and its development is critical if educators are to build on the resources of all our children.

Throughout the essay, I emphasize children's productive symbol-making, particularly their creation of imagined worlds of words, since it was research on those phenomena that led to the search for the principles presented herein. These principles suggest that, to understand the existence of "meaningful" rainbows, we must consider written language development against the backdrop of the child's entire symbolic repertoire. For the evolution of the distinct symbolic option of

written language arises from visual as well as linguistic roots. To see these roots, we must look, not with "literate" eyes, but with the eyes of the very young child.

The Nature of the Written Language Symbol System

In Werner and Kaplan's (1963) model of symbol use, any symbolic act involves enacting relationships between a symbolic vehicle (e.g., the graphics), the symbol's referent or meaning, the person producing this symbol, and an intended recipient. To make use of the system, individuals must understand, at least intuitively, the elements or units of the symbolic vehicle and how those units can be combined in rule-governed ways to communicate in a variety of situations.

In the written language symbol system, the relationships between meaning and form are complex. As an alphabetic encoding system, written language is an "approximate notation system," to use Nelson Goodman's terms (1968). That is, its parts are characters—letters—that can be clearly differentiated one from the other and, further, that are arbitrarily related to their meanings. These written characters are elements in a second-order symbol system, one in which one sort of symbol (written graphics) is related to another sort of symbol (spoken words) which, in turn, represents meaning. However, in a pure notation system, elements can be combined to refer in unambiguous ways to their meaning. The elements of written language do not straightforwardly link with their meaning. Indeed, users of any kind of linguistic symbol work with a medium that has ambiguity as a basic quality of its semantic and syntactic possibilities (Fromkin & Rodman, 1988).

The complexity of written language is dramatically evident in imaginative texts. In those texts, *distinctive elements* yield *holistic worlds*, as N. Goodman explains by comparing a musical score, a picture, and a literary text:

> We have seen that a musical score is in a notation and defines [but is not itself] a work [of art], that a sketch or picture is not in a notation [i.e., it has no discrete elements like letters or notes] but is itself a work, and that a literary script is both in a notation and is itself a work. (1968, p. 210)

Moreover, the literary work "implies more than it states, demanding an active reader" (Rader, 1982, p. 189). Such readers are thus enticed into imagining worlds by the possibilities they sense—the suggestive gaps in meaning which they themselves fill (Bruner, 1986).

This "transactional" relationship necessitated by written language, to use Rosenblatt's (1988) term, leads to another dimension of the symbol system, that defined by the relationships between symbol producers and recipients. These relationships, like those between meaning and symbolic form, are complex. While written language is a means of interaction for producers and recipients—in a sense, a way of talking, it also yields tangible products that can be talked about easily.

It is a visual medium that yields physical artifacts (e.g., displays of letters) and helps construct other artifacts (e.g., signs, menus, greeting cards, storybooks); such tangible symbolic products give rise to talk among members of communities, producers and recipients, about their function and quality (Geertz, 1983). Thus, social relationships are enacted both through and around written language.

These complex relationships between producers and recipients are also dramatically displayed in literary texts. Producers and recipients are removed in time and space. Indeed, young children are not necessarily aware that story books are written by people, that they are "not natural wonders, coming up of themselves like grass" (Welty, 1983, p. 5). Children in our society are introduced to story books by more skilled "recipients," an experience some children will have for the first time in the early school years—indeed, in school they may well be asked to produce their own such books.

The nature of these relationships between meanings and forms, between producers and recipients, suggests that the nature of the written language system itself has contributed to the division between world and word in the developmental literature. To invent words, children must understand the *kinds of elements* in the written system and how they differentiate between—link with—elements of meaning (Ferreiro, 1988). But to invent worlds, children must create functional, *dynamic wholes* that are dependent upon others for their realization (Bruner, 1986; Britton, 1970). Unlike the wholes of oral language, those of written language are visible objects whose elements are clearly displayed as distinctive units, and whose worlds serve complex functions among peoples not always equally visible. As will be illustrated, these tensions between word and world are manifested in development.

The Nature of Written Language Development

Since, as a means of communication, the written language system is shared by a community of people, young children have models of the system in use, as well as more skillful others, to guide them (Nelson & Nelson, 1978). Too, they have their own sensitivity to patterns or regularities in experience (Piaget & Inhelder, 1969; Donaldson, 1978). Over time, children's use of the written system reflects more sophisticated understandings of the relationships between graphic symbols and meanings and, also, of the kinds of relationships that can be enacted between and among symbol producers and symbol recipients (e.g., long-distance relatives; parents and babysitters; customers and waiters).

The early literacy field has found it difficult to find descriptors for the nature of this development. In the late seventies, when interest in this development was burgeoning, many educators believed that developmental "stages" of written language could be identified, that is, that children's emerging grasp of the medium could be described in orderly sequences of clearly specified behaviors, sequences

that would be appropriate for all children (see, for example, Graves, 1979; King & Rentel, 1979). These stages referred to varied aspects of written language, for example, spelling, syntactic complexity, discourse structure, and text manipulation or revision. Thus, while they reflected the multiple levels of written language, the stages did not capture the dynamic relationships of the system itself. Further, more recent scholarship has emphasized the variability of written language as a social tool. While all children encounter the same basic encoding system, they experience different degrees and kinds of discourse functions and forms (Heath, 1983; Schieffelin & Cochran-Smith, 1984). As will be further discussed, differences in the contexts in which children encounter and use the written system may well result in differences in the specific behaviors they display, thus making a linear description of development problematic. (Indeed, in general, simple stage descriptions of development have been scrutinized in recent years; see, for example, Donaldson, 1978).

In addition to the stage description of development, during the seventies educators began portraying written language growth as similar to if not identical to that of oral language (e.g., Goodman & Goodman, 1979; Weeks, 1979). These kinds of descriptions, which emphasized the "natural" processes of language learning, called needed attention to the rich oral language resources children bring to literacy learning (e.g., their sense of language as situationally, semantically, and syntactically sensible), their activeness as hypothesis-makers and, in addition, the sophisticated reasoning evident in their "errors." More recently, it has highlighted the activeness of adults as well, for the natural development of both oral and written language has come to be seen as a process both fueled and shaped by children's interactions with others (Lindfors, 1987; Teale, 1984).

And yet, as Vygotsky (1962) noted, written language growth cannot be equated with oral language development; written language stands in a different relationship to consciousness than oral language, being a more deliberate, a "second-order" system. In addition, as Vygotsky (1978) also stressed, its emergence is linked in complex ways to the child's entire symbolic repertoire. For example, its visual form makes print an "object" available for child manipulations and explorations in ways more akin to drawing than to speech.

Neither conceptually melding the processes of written and oral language development nor searching for strands of sequential behaviors can by itself reveal the distinctive complexities of systemic growth. Thus, herein, I aim to consider principles—underlying facts or characteristics that are inherent in the development of a complex symbol system. Those principles should help make sensible the dynamic links—the systemic connections—between varied aspects of children's written language development, including those between encoded word and discourse world. By "principles" I do not mean the processes or "strategies" children use to learn about literacy (e.g., Harste, Woodward, & Burke, 1984). I assume children, like adults, are sensitive to intention and context in figuring out the meaning of symbols in their culture (Bruner, 1986; Donaldson, 1978). Rather,

I refer to the nature of system development itself—the dynamic features of that evolutionary process. In the following sections, then, I suggest five such principles, using them to make sense of the literature on written language growth in early childhood.

The establishment of equivalences. To develop a symbol system, children must invent equivalences—links between some salient feature of a medium and a salient feature of their experiences. Thus, symbols do not merely stand for particular entities in the world; rather, symbols and children's understanding of the world are intricately linked (Arnheim, 1974; Goodman, 1968; Vygotsky, 1978; Werner & Kaplan, 1963).

As children learn oral language, then, they learn about the objects, people, and events surrounding them—vague perceptions take form as they are put into words (Brown, 1973; Nelson, 1973; Vygotsky, 1962). Similarly, as they draw, they learn about the visual qualities of objects and also about the graphic properties of line, color and shape (Smith, 1979). In this way, children discover the power of symbols to capture some aspect of their experience so that it can be manipulated and shared with others. In time, children use these tools to transform their experienced world into imagined ones. In written language growth, then, children's invention of new kinds of symbols makes available to them new possibilities for thinking about, relating to, and, indeed, creating worlds for themselves and others.

The exploration and orchestration of the system. Children's search for equivalences is not a neat, orderly process. Indeed, children's use of a system is initially very idiosyncratic, their encoding rules very general and flexible, so that they can freely explore the system's nature, gaining some comfort, some familiarity, with its content, structure, and function (Nelson & Nelson, 1978; Vygotsky, 1962; Werner, 1948).

The fluidity of children's early use of written symbols—its variability with their purpose and place at the moment—is clearly evident in early literacy research. In fact, children's literacy processes are not always "holistic" affairs (i.e., there are not always lexical "messages" deliberately "encoded" for some adult-like "purpose" [Dyson, 1983]). Children may try out the functional possibilities modeled around them, without attempting to precisely encode meanings, for example, when they incorporate literacy into their dramatic play (Schickedanz, 1978) or use scribble or "cursive" writing to encode long stories or letters (Dyson, 1983; Sulzby, 1985). Too, they may manipulate the graphic forms themselves without any particular intended message (Clay, 1975).

In time, they work harder to orchestrate the system as a whole—to match precisely meanings and graphics in particular situations. They thus begin to experience the tensions that exist between intended meanings and those articulated through symbolic forms, between communicated messages and those actually received by others. It is at these moments, when children express the clear desire

to signify something for some reason, that we learn most about the evolution of their search for equivalences. To use Werner and Kaplan's words, "to study experientially the way in which an individual creates symbols and systems of symbols," we must examine situations "where the handling of the dimensions of the material medium both depicts that which one seeks to signify and shows in the medium the basis for systematic differentiation of meanings" (1978, p. 451). As I will argue, in such situations young children may grapple with the word and the represented world as different kinds of entities and search for rapprochement between them.

Reliance on shifting relationships of form and function. The development of symbolic media does not proceed in a linear way. Children may learn to "mean"—to fulfill certain kinds of intentions or functions through particular forms that will later be served by other media. For example, gestures are used for some of the functions later fulfilled by words; similarly, pictures may be used in ways that foreshadow the use of written language (Dyson, 1982; Gundlach, 1982; Halliday, 1977; Werner & Kaplan, 1963). Further, children's understanding of the functional use of earlier controlled kinds of media seems to influence how they approach others (Gardner & Wolf, 1987).

Thus, it is not sensible to look for the roots of literacy simply in children's early "scribbles" or "invented spellings" nor exclusively in adult-guided (or "scaffolded") literacy activities, because later written language does not come in any straightforward way from early written language. In Vygotsky's words, written language is:

> the culmination of a long process of development of complex behavioral functions in the child. Only by understanding the entire history of sign development in the child and the place of writing in it can we approach a correct solution of the psychology of writing. . . . It does not follow a single direct line in which something like a clear continuity of forms is maintained. (1978, p. 106)

And, indeed, the literacy portraits of young children that fill the pages of the developmental literature reflect, not only the evolution of written language itself, but the evolution of children's symbolic repertoires. To begin, very young children's approach to writing reflects their earliest way of symbolizing, that is, their use of movement and words to represent people's actions in varied roles (Gardner & Wolf, 1987; Nelson, 1985). If very young children have the opportunity to write, their meaning is in the talk and the actions they use to participate in the literacy event (Dyson, 1983; Luria, 1983). Children may make lines and letter-like marks that approximate the writing of those around them and may assume that, since they have written, their print can be read (Clay, 1975). They may offer their graphics to others and thereby confer upon them the status of "gifts" or "presents" (Bissex, 1980; Dyson, 1982; Taylor, 1983).

When young children begin to realize that forming letters is not enough to produce something readable, they may continue to "just write" letters or to use "curspid" (wavy-line) writing when making functional use of extended texts. They are most likely to attempt more precise encoding when writing smaller units, especially names (Baghdan, 1984; Bissex, 1980; Clay, 1977; Durkin, 1966; Ferreiro, 1988).

Studies of young children's encoding have documented the increasingly fine differentiations young children may make as they attempt to link the elements of written language with specific names. These differentiations seem to reflect their expanding symbolic repertoires. For example, in their initial attempts to label, preschoolers often search for direct and concrete relationships between graphic features and referents, rather than phonological ones. Young children seem particularly sensitive to the age and size of the referent; they may assume large objects require many letters, small ones just a few (Ferreiro & Teberosky, 1982; Luria, 1983). This concern for a physical relationship between form and meaning is sensible, as young children are also beginning to use physical features of objects to create graphic and structural symbols, for example, in drawing (Smith, 1983).

Such hypotheses may introduce many puzzling circumstances for children; the names of fathers and mothers may well have fewer letters than the names of babies. As children resolve such puzzles, their encoding behavior may gradually reflect an understanding that there must be differences in the selection and/or the arrangement of elements (letters) if there are to be differences in the meanings found there (Ferreiro, 1988; Lundsman & Levin, 1987). They begin to search for some sort of reliable one-to-one correspondence between selected letters and referents, behavior that may reflect the emerging numerical sensitivity evident in children's later symbol-making in varied areas, including drawing and singing (Gardner & Wolf, 1987). The children's search may lead to an analysis based on syllables (Ferreiro & Teberosky, 1982) or the articulation of letter names (Read, 1986). In time, children begin to use characteristics of the sound of the word itself to invent spellings, evidence that children are beginning to use written language as a second order or notational system—to use letters to represent sounds, rather than letters being themselves the sounds (Beers & Henderson, 1977).

Research on young children's encoding of words typically has not grappled with functional shifts, nor with the complex relationships inherent in the medium—the tensions between word and world—at least in part because of the very focus on units of words, on labels. In the labeling action, symbolic form and holistic meaning, the word and the "world" being created, are compatible, for the world is another "thing"—a "name" (Vygotsky, 1962; Papandropolou & Sinclair, 1974).

When researchers examine children's use of written language for other functional actions, word and world often separate. For example, to fulfill a story creating function, children may weave written words together with talk and

drawing, calling upon all their symbolic powers (Newkirk, 1987; Dyson, 1983, 1989). Typically, any written words are indeed words in, rather than the essential stuff of, their worlds. That is, the words are the names of objects or figures or, perhaps, the sound of an event (e.g., "BOOM"). The bulk of the meaning may be in drawing or talk—or perhaps remain unarticulated in their own memories and imaginations.

Kindergartner Lamar, for example, wrote the same word for most of his kindergarten year, manipulating the spelling of *Boot* or *boo*, writing the elements backwards and forwards across his drawing and writing journal, claiming only to be writing "boot" or "boo." In a similar way, Lamar explored how to fit together limbs and torso in his drawing of men, manipulating his repertoire of lines in many different ways. Finally, in the spring of his kindergarten year, both of these visually explored symbols met. Lamar drew a man standing firmly aboard a ship, shooting up another ship upon which was written "Boo." Lamar made a word within a world.

In one sense, children's ability to produce worlds of words is a matter of sustaining and organizing those words. The demanding deliberateness of writing may strain children's encoding knowledge and even their memory for what they want to write. Thus early school age children may write brief, repetitive sentences ("I love . . . ") (Amarel, 1980; Clay, 1975; King & Rentel, 1981; McCaig, 1981; Sowers, 1979). When expressing more complex ideas, they may become entangled in written words, leaving sentences unfinished or structured in strange ways (Weaver, 1982).

However, the challenge of producing written discourse worlds goes beyond the challenges posed by encoding and memory. To produce such worlds, they must confront the puzzling nature of the written system, where the visible and the invisible are paradoxically linked. Children's understanding of the nature of this system is not separate from but intimately linked with their understanding of the nature of the functional contexts specific to that system, as is stressed by the next principle to be discussed.

Differentiation and integration of symbolic functions. As Geertz (1983, pp. 94-95) explains, a symbolic work in any medium serves multiple functions. It not only *represents* an imagined world but also *evaluates*—organizes our feelings about—the experienced world and *forges social relationships* with those with whom we share both everyday and imagined realities. In Geertz's words,

> the chief problem presented by the sheer phenomenon of aesthetic force, in whatever form and in result of whatever skill it may come, is how to place it within the other modes of social activity, how to incorporate it into the texture of a particular pattern of life [a problem that gives rise to talk] about how it is used, who owns it, when it is performed, who performs or makes it, what roles it plays in this or that activity. . . . Separate the skill of the carver or

the story teller from the social connections with others or from the ideational sense of the nature—the goodness or the evil, the ambivalence—of life, then you no longer have art, just skill, or social relationship, or attitude. (1983, pp. 97-98)

By the early school years, children from a range of cultural and social backgrounds are able to construct or symbolize worlds in oral stories, drawing, and play. These worlds have an important role in their social lives as peers and in their own reflection on emotionally significant experiences (Dyson, 1989; Fein, 1987; Miller, Potts, & Fung, 1989; Preece, 1987; Umiker-Siebert, 1979). Yet, as already suggested, early story writing tends to consist of labels or brief descriptive summaries of messages carried elsewhere and thus to serve primarily a representative function. Indeed, as already discussed, to grasp the alphabetic link between written graphics and spoken words (i.e., to construct a second-order symbol system), the transparent medium of talk must become a thing for children so that it can be represented in visual forms. However, to grasp the multiple functions of written texts, the visual graphics must themselves become transparent, so that strings of separate words can form a holistic world—a time and space—to interact and to reflect. As a developmental phenomenon, then, written language must be transformed from direct to second-order symbolism and back again to direct symbolism—to a transparent medium (Vygotsky, 1962).

How do children come to define writing itself as an interactive medium where whole worlds may be collaboratively shaped with others? From the point of view being developed herein, children's grasp of how text worlds function in the social and experienced worlds surrounding them is linked with children's differentiation of the nature and power of diverse symbol systems, for children must learn how to fulfill through writing the social and evaluative functions many are already fulfilling through play, pictures, and talk (Dyson, 1989a). And it is through social interaction that this differentiation of symbolic systems and functions occurs, which brings us to the last principle to be discussed.

Participation in social dialogue. The child's emerging control of any symbol system is simultaneously the child's increasingly active participation in a cultural dialogue, for symbol systems contain a people's way of organizing and responding to experience. To again quote Geertz,

> Such signs and symbols, such vehicles of meaning, play a role in the life of a society, or some part of a society, and it is that which in fact gives them their life. . . . [This] is not a plea, either, for the neglect of form, but for seeking the roots of form not in some updated version of faculty psychology but in what I have called . . . "the social history of the imagination"—that is, in the construction and deconstruction of symbolic systems as individuals and groups of individuals try to make some sense of the profusion of things that happen to them." (p. 119)

Through dialogue with others, children enter into "the social history of the imagination." Through dialogue, they come to realize the functional potential of the varied symbol systems valued in their society (Vygotsky, 1978). Interaction reveals the social desires, expectations, and even the resources of writers and readers.

For example, Vygotsky's student Luria (1983) linked the evolution of children's understanding of the written language encoding system to their grasp of the specific function of print as an aid for recalling messages. Moreover, he illustrated in detail how a functional and interactive context enacted by adult and child might lead to the grasp of that function and the beginning of the child's search for ways of precisely differentiating meanings through letter graphics. In Luria's work, social interaction did not merely guide or "scaffold" children's learning (Bruner, 1975). That is, the adult's response to a child's writing did not lead the child to adopt adult-like writing behaviors but to revise his or her child-like ways to meet newly perceived functional demands. (More specifically, the observed children drew upon their knowledge of drawing as they refined their ways of writing, illustrating the shifting interplay of functions and form previously discussed.) Interaction, then, set up a dialectic between child and other, between encoding form and social function (Bruner & Haste, 1987).

Similarly, the evolution of the child's grasp of discourse forms is linked to social interaction. Composers in any symbolic medium work "with [the] audience's capacities—capacities to see, or hear, or touch, sometimes even to taste and smell" (Geertz, 1983, p. 118). Interacting with others' sensory capacities through an indirect medium like print is a slowly evolving capacity, one supported both by "the experience of living" as well as by the social responses of others to early efforts, that is, by appreciating the ways others visualize, emotionally respond to, and reason about one's efforts. In such ways, children come to understand the possible worlds—the possible relationships to others and to experience—that can be enacted through manipulating the elements (and thereby the words) of written language. They come to see that writing one's story is not simply making words visible on paper but enacting worlds and, with the exception of poetry, the dimensions of those worlds are not primarily visual (Graves, 1982). Or, as a child once told me when I inquired why she so preferred drawing to writing, drawing is indeed much "prettier."

To understand how interaction specifically influences the development of story worlds, researchers have focused particularly on adult/child interactions during story reading and dictating (for a review of this research, see Teale, 1987). Through these early interactions, some children learn orally the discourse conventions they will eventually use in the written medium. Yet, as argued throughout this essay, written language is not just speech written down—even when that speech has itself been influenced by "literate" experiences. Just as interaction with others can be a catalyst for children's deliberations about the encoding system, the discourse conventions learned through interaction are subject

to and catalysts of children's deliberations about the nature and function of text worlds. Children's talk as they write story worlds reveals the confusions young children—even those well read (-to)—have about the relationships existent among their experienced ("real"), imagined, and ongoing social worlds (for examples of such productive confusions, see Dyson, 1988, 1989a).

Further, for many children, the evolution of written worlds will take place in school. Young school age children have different relationships to adults and to peers than do preschoolers, relationships that may also vary because of differences in children's cultural backgrounds (Gilbert & Gay, 1985; Gillmore, 1983; Philips, 1972; Tharp et al, 1984). For many children, relationships with peers are of central importance (an observation that does not discount the importance of teachers' direct and indirect guidance, as will be discussed). Given that many of children's communicative and symbolic skills develop through social interaction with peers (Garvey, 1986; Hartup, 1983), it is sensible to assume that their social understanding of literacy might also be influenced by peer interaction. In a community of peers, the invisible relationships between and among symbol producers and recipients may be in fact not only visible but relatively amenable to child manipulation.

For example, in a longitudinal study in an urban primary school, Dyson (1989b, 1990) focused on the changing role of writing in 4- to 8-year-old children's symbol-making and social interactions during a daily composing period. The observed children initially relied on drawing and talking to carry much of their story meaning. Moreover, the social and evaluative functions of composing were accomplished primarily through drawing and talking, as peers talked about and at times playfully dramatized each others' stories. However, as children began to attend to each other's evolving texts, their playful and critical talk engulfed their writing and helped it become a legitimate object of attention, separate from their pictures. They began to consider critically the relationship between their pictures and their texts. Gradually the children began to assume more deliberate control of the kind of information they would include in each medium. Further, they began to use writing playfully to engage (i.e., interact with) their friends and to solidify or change their social identity (i.e., how their work and indeed they themselves were talked about). Thus, their words became worlds, in part at least because they began to serve multiple functions within their social lives. (For a related discussion about older elementary school children, see Daiute, 1989.)

While this study demonstrated the potential power of classroom interaction for supporting literacy growth, many studies have displayed the problematic nature of this power. As shown most dramatically by the work of Heath (1983), the nature of the interaction surrounding texts in school may differ strikingly from that children may have experienced outside of school, as may the kinds of literacy functions used and even the nature of the discourse forms valued. Further, in all classrooms, literacy is in part a performative skill to be mastered and displayed for teachers and parents. And that need to figure out how to play by the rules of

school—to be viewed as a competent student—can make the functional potential of the written symbol system illusive. Thus, children may write sentences with periods, but they may not organize those sentences to serve varied pragmatic purposes or to give voice to their daily concerns (Dyson, 1984; Edelsky & Smith, 1984; Florio & Clark, 1982).

Summary. In the preceding pages, I have attempted to view written language development within the broad context of children's development as symbolizers, describing principles that may apply generally to the evolution of their symbolic capacity. Children do not copy the world but examine it, discovering links—equivalences—between the nature of media and the nature of the world. There seems to be an early exploration of the varied dimensions of a medium and gradually increasing orchestration of the system as a whole in particular contexts. Children's use of written language, though, is interrelated in complex ways with their use of other media. They may use earlier controlled symbolic forms, like talk and drawing, to fulfill certain functions later served by writing. Further, their efforts to represent meaning through print are influenced by their ways of using other symbolic forms. Their developing control over written language, however, is not dependent only upon interaction with media but also upon their interaction with other people. Those others model and guide their use of the system and, moreover, shape their perception of the multiple ways written language functions in their society. In any literacy event, children's ways of using written language—their ways of examining and shaping written symbolic forms and of integrating those forms with other kinds of symbolic media—are influenced by and influence the broader function the written symbols may serve as well as the nature of the ongoing dialogue with adults and peers. These dialectical relationships between symbolic form and social function, between self and others, are inherent in symbol development. In the next section of this article, I illustrate these broad principles by discussing how they were actualized in the course of one young child's writing in the opening months of school.

The Principles of Symbol Development: An Illustration

Nate, a five-year-old Anglo boy, was a focal child in an extension of the discussed project on the developmental roots of writing's multiple functions (for details of methodology, see Dyson, 1989b). The activity of interest in that project was the construction of imagined worlds in a situation de ed by the teacher as a literacy task designed to help children learn to write and read. In this activity, the children drew, wrote, and/or dictated in a "journal," a construction-paper book consisting of alternating blank and lined pages.

Nate's early way of participating in this activity suggested that he had limited experience writing and drawing. However, over time, Nate's sense of the functions of this composing activity changed, as did the symbolic forms through which he fulfilled those functions. The dramatic nature of these changes in a relatively

short amount of time (the opening four months of school) makes his case a particularly good one for concisely illustrating the discussed principles. Rather than illustrating each principle separately, I first describe Nate's changing journal time behaviors in a holistic way and then summarize them by making explicit use of the discussed principles.

In meeting the expectation for "stories," Nate, like many children, began by drawing and initially aimed to draw anything that might indeed be "something." He was often tense during journal time, sometimes dissolving into tears as he erased and re-erased his lines, all the while expressing great dissatisfaction with his work. For a child who wanted to do things right in school, this journal business was hardly satisfying—initially. Nate did attend carefully to how his peers coped with the task, and he admired those who seemed to be managing quite well. One day he remarked about his peer Ashlie:

> You know Ashlie? She wrote her own story. Remember the one 'bout the house? Ashlie wrote it all by herself. That was Ashlie.

His initial journal entries were dictations, usually written by his teacher, about his drawn circles and lines (as in "Mostly these are straight lines with little triangles and it's a design."). Sometimes they were descriptions of animals he had discovered amidst his efforts.

Despite Nate's frustration with the official journal activity, he was interested in the workings of the writing system. He sometimes inventoried and displayed certain letters and words that he knew, particularly names. Moreover, he began to examine carefully and discuss spontaneously with his teacher letters in his dictation and their relationship to names he knew. For example, Nate responded to the letter *K* with "My sister's name begins with a *K*. Wanta know what it is? My sister's name is Kimmy"; and to *E* with, "*E*'s in my name. Nate. Or Nathan. Nathan doesn't have an *E* in it." Nate, then, seemed to have personal connections with, and experience talking about, special words and their letters and he used this knowledge to reflect on the workings of the written system:

> Nate has just dictated, "This is a design." He attends closely as the words are written and then observes:
>
> > This [*this*] has the same thing right here, right? If you take away these two letters [*Th*], it would say the same right here [*is*], right? (Nate is noticing the similarity between *this* and *is*.)

After a month of school, Nate began to draw recognizable objects (flowers, people, animals) and to "take off" from those objects to dictate stories that went beyond descriptions. While he had not initially evidenced his skill as a storyteller in this task, he also did not, in one month, acquire "story knowledge" but, rather, his ability to form recognizable objects now led him to bring into the task the

storytelling knowledge he had developed through other activities. Consider, for example, the following excerpt from Nate's "dinosaur season" event:

> Nate has just finished drawing his picture and, since his teacher is not available, I am taking dictation. He begins by labeling his figures: "This is a cat and a turtle." On his own initiative, Nate himself writes *cat* and, with a little help, *turtle*. Then the story takes a different turn:
>
> Nate: This is a cat, and a turtle, and a dog came along and just—and chased the cat, and a monster came along and chased the turtle—
>
> Dyson: (attempting to write) And a dog came along and chased the cat—and then what? And a monster chased the turtle?
>
> Nate: turtle, and ate the turtle up and a dog ate the tur—the cat, and the dog ate the cat up. But the DOG was really a BAT. The Tyrhonosaurus—
>
> Dyson: Wait a minute. (I repeat the story and, with Nate's help—and Jeremy's editorial comments ["Wierdy story!"]—catch up. In this process, Nate replaces the Tyrhonosaurus with a witch:)
>
> Nate: And a WITCH came along—
>
> Jeremy: and ate—and ate—and ate the bat all up for dinner!

Nate now draws a witch on a new page. However, he is upset that Jeremy has intervened in his story; while he dictated "a witch . . . ate the bat up" right after Jeremy's remark, he now changes his mind.

> Jeremy: I told you [that the witch ate the bat up].
>
> Nate: No, he didn't. Didn't. Didn't.
> . . .
>
> Nate: The witch came along and the MONSTER ate the WITCH up.

Nate's story continues through many pages; a sample follows:

> And the monster ate the bat up. And a two-headed Tyrhonosaurus Rex came along and ate the monster up. And a Triceratops came along and killed the Tyrhonosaurus Rex [because the Tyrhonosaurus Rex wanted to eat the Triceratops

too]. And Ancleasaurus came along [and the Ancleasaurus almost ate the Triceratops] . . . And Ancleasaurus died. And THUNDER LIZARD came along, and he tried to kill Alesaurus but Alesaurus ate him. . . . And they died and it was over, the dinosaur season. And then a saber-toothed tiger was hiding and jumped out and ate the wooly mammoth up. . . . [sections in brackets indicate some of the ideas which were not recorded due to the difficulty of keeping up with the fast-paced dictation.]

Jeremy's intervention suggests the emerging role of oral activities (like dictation) in peer social life, a role much more evident in the slower and more permeable task of drawing.

Nate had always been interested in his peers' activities, a common curiosity in young children (Garvey, 1986). As both the journal activity and Nate's relationships with other children became more comfortable, playful talk, like that heard in the dramatic play corner and the playground, infused and dominated Nate's drawing. Stories were no longer afterthoughts—pieces composed to justify and extend drawing attempts—but dramatic events that unfolded as his picture took shape. For example, in the following event, Nate involves Chiel in his own evolving drawn story and participates as well in Chiel's story. Together the boys interactively create a story world and reflect on the nature of their experienced world.

Nate is sitting next to Chiel today. He has just drawn a person jumping off a diving board. As he works, he calls Chiel's attention to his efforts:

Nate: Boing, boing, boing. (bouncing in his chair) Boing, boing, boing. Look! There's no water in the swimming pool! HAH! I MADE A PICTURE OF SOMEBODY. Chiel, I made a picture of somebody diving off the diving board. And there's no water in the swimming pool. Hah hah. Hah hah.

Chiel: Oh! I have no head. (feeling above his head and playing along with Nate's drama)

Nate: WHAT?! I have no head! HELP ME!

Chiel announces that he is drawing space [i.e., the solar system and, amidst the system, a rocket ship]. Nate discusses the planets with Chiel, including the fact that Mercury is the hottest planet, because as Nate explains, it's closest to the sun. Nate returns to his own piece.

Nate: (stops drawing) Chiel! Chiel! I know. That's what we could do. You know what?

Chiel: But with the sun, I almost burned my eyeballs off.

Nate: But here is the sun [on my picture]! Look! Look! Look! The person, the person does EEEEEEWWWWWWWWW. Dum dum. (dramatizing person diving up toward the sun and then heading toward water)

Chiel: No! Make him head towards the sun. No, make it—

Nate: Look look. Let me show you where the sun is. . . . Look! Look! Chiel, look! AWEEE! I'm getting burned! (laughs)

Chiel: Make a sun right here [in the path of the diver]. Make a sun right there.

Nate: No. I'll make—No I'll make um um Mercury right here. (Nate adds the marks under the diver's head.)

Chiel: Mercury. Yeah! He's gonna bump into it. (laughs)

Later Nate dictates:

> Once upon a time there was a diving board. And a person dived off it. And there was no water. And he bumped into Mercury and broke his head. And he went through Mercury and broke his head. And he went through Mercury and he went down to here and broke his stomach.

Nate assumed even greater control over the journal task by independently writing within his drawing. Nate's extended writing was quite sophisticated and revealed his understanding of the alphabetic principle; this understanding may have been supported by his curiosity about the connections between letters and names, a curiosity he brought with him to school. The following anecdote describes the first such writing:

A few days earlier, Nate dramatized and drew a story about a person whose boat had been wrecked. On that day, he dictated this piece:

> Once upon a time there was a boat. And there was two wheels, and the person in the boat had a TV and his sunglasses and the key for the treasure box down in the water. And the boat got wrecked. And the person fell down into the river.

On this day, Nate returns to this earlier picture, draws some arrows, and writes:

> FURLVDKITRH (translation: If [F] you [U] are [R] looking [L] for [V] the [D] key [K] it [IT] is right [R] here [H].)

Despite the emergence of this writing, Nate's text entries continued to be primarily dictated plot summaries. It would be another year until he built entire written worlds that fulfilled both interactive and reflective purposes, a process examined in the earlier and larger study (Dyson, 1989b).

To summarize, Nate's performance in the journal activity was influenced by stories he had heard and told, his knowledge about and sensitivity to names, and his sociodramatic play. He was first involved in a *search for equivalence* in drawing, rather than writing, which influenced the kinds of oral texts he produced. His initial intention was simply to represent something or some event that would be a reasonable picture. That is, he relied primarily on the symbolic form of drawing to fulfill the function of representing a reasonable story, a *form/function* relationship that gradually changed. Nonetheless, Nate did *explore* the graphic and encoding features of written language and, gradually, he began to *orchestrate* and extend this knowledge through his participation in the journal time activity. This orchestration was first apparent in his *social interaction* with his teacher.

Despite Nate's emerging encoding knowledge and, also, his adoption of story conventions (apparently learned through participation in literacy events with adults), these conventions of word and discourse world did not alone transform his use of the journal activity. It continued to be an opportunity to represent a reasonable story. As the journal activity became more embedded in peer social life, the symbolizing aspects of the story-creating activity that Nate most firmly controlled—drawing and talking—began to reflect the interactive and reflective functions previously fulfilled through other means (e.g., through play). That is, Nate began to use this literacy activity for *multiple symbolic functions*. While written labels and dialogue began to appear in his drawing, the differentiation and integration of these functions into the writing act itself would await not only his increasing skill as a speller of words but also his grappling with how writing itself could form a world where he could play and reflect with others. While not detailed in this essay, this process would be fueled by social dialogue with teacher and with peers, which would highlight for Nate the tensions between the kind of information conveyed by each medium—between his meaning and its symbolic realization and between his own intention and that assumed by others.

In brief, for Nate, the history of his literary and literate "imagination" was indeed a social one involving shifts of function and forms, social give-and-take, and his own continuing search for sensible ways to organize and represent his world. While the particulars of his behavior are not generalizable, the principles

inherent in their evolution are assumed to be so. Indeed, the purpose of this paper has been to analyze critically the literature on written language use in order to argue for their existence.

Implications: Reconceptualizing and Problematizing Written Language Pedagogy

In searching for an understanding of the evolution of written language, many scholars have conceptualized writing as an extension of oral language's functional potential (Halliday, 1980). In this essay, I have considered written language as a distinct symbol system, linking its developmental history to the child's entire symbolic repertoire, that is, to the child's ways of linking meanings and forms. Further, I have emphasized that written language, like all symbol systems, is only a tool; its use is defined by—not merely set within—the social relationships (the self and others) that are of its essence. This approach has yielded a set of developmental principles, conceptual tools that may help educators think about written language learning and teaching in new ways. While I have emphasized the evolution of written imaginary worlds, the developmental principles discussed would seem to apply to all kinds of extended literacy use; and, while I have focused on productive use of written language, the principles would seem to be reflected in its receptive use as well.

Viewing written language development as an aspect of symbol development suggests that its nature cannot be described as *either* the child's construction of forms within any particular functional task, *or* the child's socialization into adult literacy practices. Rather, it may be best described as a dialectical process involving function and form, self and others. In the early years, then, children require, first, a diversity of functional experiences, from their points of view, that allow them to examine this puzzling medium from many kinds of vantage points and, moreover, that allow them to couch their investigation of the medium within the use of other symbolic forms. Second, they require other people who not only model and involve them in adult literacy practices but who also interact with them about the children's own written efforts, thereby stimulating their re-visioning of written language's possibilities. The kinds of social relationships that inform children's use of written language will change across contexts and over time (e.g., as children move from home to school).

To the extent that there is a "stage" of early development, it is a broad, somewhat idiosyncratic one, in which children gather social and symbolic information about written language. This period of open exploration may gradually give rise to attempts at integration within familiar contexts, just as may happen in symbol development in many areas (Nelson & Nelson, 1978). That is, children begin to orchestrate—draw upon all their knowledge—to write or read within particular activities. These orchestration efforts are negotiated through the use of alternative kinds of symbols and with the support of other people (Cochran-

Smith, 1984; Dyson, 1982; Harste, Burke, & Woodward, 1984). In orchestrating written language activities, children may experience tensions between the encoding of individual words, this drawing of speech that Vygotsky described, and the building of multifunctional, holistic worlds. Resolving the tensions between worlds spoken, drawn, and written—figuring out how to make word pictures and visible rhythms and sounds, how to make a static string of words an enacted and dialogic world—is a basic developmental challenge.

On diversity in development. Viewing written language growth as part of the child's developing symbolic repertoire and changing social relationships may allow a more open-ended vision of its development than does one which emphasizes only the similarities of written and oral language growth. Such a view—even one that acknowledges that language processes are not simply biological givens but sociocultural constructions (i.e., learned through interaction)—seems to block from vision the many kinds of symbolic and social experiences that fuel written language growth.

For example, the one experience that has been emphasized more than any other in written language development is early storybook reading and, in particular, specific kinds of parent/child interactions about books. Indeed, such experiences are emphasized even by those with nondevelopmental visions of early growth (i.e., those who view written language as primarily a skill taught in school, a skill some children are more "ready" to learn than others; for an illustration of the emphasis on early story reading, see Anderson, Hiebert, Scott, & Wilkinson, 1984, especially pp. 23-24).

As discussed earlier, studies of such interactions have allowed invaluable insight into how dialogue—interaction—serves growth. But they cannot be translated in any simplistic way to descriptions of how children, from diverse sociocultural backgrounds, develop written language. Clearly it is helpful to children if they come to school with a rich background of storybook experiences. And written language development *is* contingent upon participation in social dialogue. But literacy—including poetic literacy—can arise from diverse kinds of interactive relationships, as the lives of many non-mainstream authors illustrate (Heller, 1990; Olsen, 1978). For example, as argued earlier, social interaction with peers could at least potentially play a critical (and positive) role in many children's developmental histories as literacy users, given that diverse opportunities for peer interaction are structured into the language arts program. The constellation of interactive experiences important for literacy's development will vary with the social values and personal needs of the learner and the interactive possibilities of the educational context (Erickson, 1984).

Moreover, young children from diverse sociocultural backgrounds bring their symbol-producing prolificacy to school—their talking, drawing, playing, storytelling and, in our society, some kind of experience with print, all of which offer resources with which both teachers and children can build new possibilities. The

ability to organize and express inner feelings and experiences through shared symbols is a part of all children's human heritage; meaning-making, like eating and sleeping, in an inherent part of being alive (Langer, 1967).

Thus, there is no need to assume that the onus for children's written language progress lies in particular kinds of "natural" language experiences in the home, given a rich, flexible literacy program in school, one that allows children to make use of the tremendous resources they all bring. There is, however, a great need to understand how educators might build from these diverse resources (see also Bishop, 1988, and Scott, 1988).

On integration in pedagogy. The nature of "rich" literacy programs for children is itself a matter of considerable and continual debate. Not only children, but adults too struggle with tensions between world and words, tensions that fuel pedagogical arguments between "whole language" and "basic skill" proponents. These tensions too seem to need resolution. The developmental principles discussed suggest some possibilities for negotiation.

As argued by those who advocate "whole language" pedagogy (e.g., K. Goodman, 1988), the emphasis on formal skill instruction in early schooling, with its focus on words and their letters and sounds, seems problematic. From the theoretical viewpoint of this essay, children need access to the kinds of situations where they will be involved in a "search for equivalences," in struggles with forms for some purpose—and where teachers might call children's attention to the nature of the system. Children's attempts to write particular planned messages (labels, captions, letters to friends and family) seem to offer teachers ideal opportunities to assist children in their search (Clay and Cazden, in press).

The increasingly narrow instruction on letters and skills in our early childhood classrooms might not be harmful for children who have had many opportunities to experience extended written language outside of school; for children who have not, it may support continued social inequities (for a discussion of the changing character of early childhood programs, see *Early Childhood Research Quarterly*, September 1987, entire issue). Even if children learn the "basic letters and sounds" (and thus improve their achievement test scores), they may not experience the social and personal power of print. Moreover, the development of an awareness and ability to control deliberately written language's multifunctional potential may build on social experiences in other media, including play and drawing—both experiences that are increasingly limited in kindergarten and the early grades.

On the other hand, some educators seem to interpret "whole language" pedagogy as implying a passive role for teachers (Cazden, in press). Teachers may be reluctant to focus children's attention on, give them information about, or help them grapple with the words in their world. In my own experiences, I have observed teachers urging children who clearly have not yet grasped the alphabetic

nature of the written system to "sound [the word] out yourself," a process that, as one child said frankly to me after her teacher left, "doesn't help me at all."

As argued earlier, children who are just beginning to explore the written system are at least potentially curious about its workings. They need responsive others, who answer their questions about letters and words (Durkin, 1966), especially about the names of important people and things, and who help them transcribe their words. The absence of such interactive experiences—experiences mainstream children may more often have outside of school (Cochran-Smith, 1984)—may limit children's opportunities to explore the system. Moreover, children may need teachers to help them build from and orchestrate their diverse experiences with words and symbolic worlds (for a discussion of teachers' role in this connection-making, see Dyson, 1989c). Neither the world nor the word but the tension between the two, tension both fueled and mediated by interaction with other media and with other people, accounts for the evolution of written language.

Conclusion: On Rainbows

For Gina, rainbows may not have been emotionally significant, but they were symbolically accessible and visually pleasant. Gradually her need for writing which described "pretty" pictures gave way to a need for writing that was itself aesthetically (socially, emotionally) pleasing, that was itself a world—a work—as well as a notation system for words.

Now a competent third grade writer, Gina looks at her early writing with literate eyes, seeking literate rather than visual meaning. So it is with adult researchers. Depending upon our own orientation, our disciplinary values, and pedagogical points of view, we tend to highlight world or word, pulling apart the essential paradox—the worlds that must yield words, the words that must yield a world—and the dialectic between form and function, self and others that is development.

In this essay, I have offered some initial attempts at a more integrated vision of written language development, particularly, of how children develop as writers of worlds. This vision has clearly been shaped by my own "ancient eyes" (N. Goodman, 1968, p. 7), my own past experiences, and, equally clearly, in need of enriching by those who can speak from different vantage points. Nonetheless, this effort at broadening our theoretical and pedagogical vision of written language development, and of the kinds of symbolic and social experiences that nurture it, is critical, if we are to support the diverse "typical" children in our schools. These visions must be dynamic, not static, multidimensional, not merely multilayered. And, as with grasping the meaning of little girls' rainbows, the key to such an envisioning lies, not in merely studying rainbows (or writing), but in understanding the broader social and symbolic history of rainbow makers.

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